

IN THE CLAIMS:

Please delete claims 1-28 without prejudice.

Please add the following new claims (beginning at the top of the next page).

CLAIMS NEWLY-ADDED HEREIN (CLEAN FORM)

29. A method of playing music using a portable, hand held system comprising the steps of:

processing audio stream events, wherein one or more of the audio stream events has associated therewith sound sample data, wherein the sound sample data is provided to a digital signal processing resource, wherein at least one sound sample comprises a speech sentence;

providing a sequence of MIDI events to the digital signal processing resource;

providing a first MIDI event configured to include delta time parameter data associated with playback timing of at least one audio stream event; and

synchronizing the audio stream event with the sequence of MIDI events using the first MIDI event.

30. The method of claim 29, wherein the first MIDI event is a System Exclusive MIDI message.

31. The method of claim 29, wherein the sound sample data is decoded from a compressed audio format before being provided to the digital signal processing resource.

32. The method of claim 31, wherein the compressed audio format is encoded in ADPCM format.

33. The method of claim 29, wherein the digital signal processing resource comprises a first portion associated with the MIDI events and a second portion associated with the sound sample data.

34. The method of claim 29, further comprising providing a second MIDI event associated with at least one sound effect to be applied to the sound sample data associated with a particular audio stream event.

35. The method of claim 34, wherein the second MIDI event comprises a system exclusive MIDI message.

36. The method of claim 29, wherein the audio sample data are provided from a writeable memory resource location.

37. The method of claim 36, wherein the writeable memory resource location comprises a flash memory.

38. The method of claim 29, wherein at least one of the audio stream events is processed in response to user input.
39. The method of claim 29, wherein the timing of at least one of the audio stream events is processed in accordance with musical laws.
40. The method of claim 29, wherein the timing of at least one of the audio stream events is processed in accordance with a user selectable musical style.
41. The method of claim 29, wherein the timing of at least one of the audio stream events is processed in accordance with the beginning of a musical bar.
42. The method of claim 29, wherein the sound sample data are provided to the digital signal processing resource in response to user input.
43. The method of claim 29, wherein the digital signal processing resource comprises a hardware digital signal processor.
44. The method of claim 29, further comprising providing a MIDI interface configured to receive firmware upgrades associated with the digital signal processing resource.
45. The method of claim 29, further comprising providing a MIDI interface configured to transfer audio files.
46. The method of claim 29, further comprising providing a USB interface configured to transfer audio files.
47. The method of claim 29, further comprising providing a music algorithm for processing at least one of the MIDI events in accordance with a music generation algorithm, wherein the music generation algorithm is comprised in part by at least one musical law.
48. The method of claim 47, wherein the sound sample data are saved to a memory location.
49. The method of claim 47, wherein a series of the MIDI events is saved to a memory location.
50. The method of claim 47, wherein the sound sample data are provided from a flash memory resource location.
51. The method of claim 47, wherein at least one of the audio stream events is processed in response to user input.

52. The method of claim 47, wherein the sound sample data are provided to the digital signal processing resource in response to user input.

53. The method of claim 47, wherein the digital signal processing resource comprises a music synthesizer.

54. The method of claim 47, further comprising providing an illusory radio station function, wherein the computing system selectively processes algorithmically generated musical data in accordance with an imitation of a radio station.

55. The method of claim 54, further comprising providing a reception means for receiving a broadcast radio station signal, wherein the computing system selectively switches between processing the illusory radio station function and the broadcast radio station signal.

56. The method of claim 47, further comprising providing a music style selection interface, wherein the musical generation algorithm is operated in accordance with a user selectable musical style.

57. The method of claim 47, further comprising providing a user interface supporting user interactivity with the musical generation algorithm, wherein the user interface is comprised of a display of instrument lanes.

58. The method of claim 57, wherein the user interface comprises a display of animated sound waves and/or animated pulses.

59. A method of automatically composing a melody comprising the steps of:
providing a computing resource for generating and/or processing a series of MIDI events as part of an automatic composition algorithm; and

providing a memory area containing a plurality of sound samples, each comprised of an audio stream;

wherein one or more of the sound samples comprise vocalized speech; and wherein the automatic composition algorithm temporally synchronizes the processing of one or more sound samples in accordance with the series of MIDI events.

60. The method of claim 59, wherein a MIDI channel is assigned to the plurality of sound samples.

61. The method of claim 59, wherein one or more sound samples are defined as part of a MIDI based sound library associated with a percussion type instrument.

62. The method of claim 59, wherein the computing resource process one or more sound samples as a special case of MIDI-based instrument sounds.

63. The method of claim 59, further comprising:
providing a microprocessor executing a microprocessor operating program, wherein the microprocessor comprises part of the computing resource; and
providing a download interface for receiving updates to the microprocessor operating program.

64. The method of claim 59, further comprising providing a music database stored in digital form, wherein the computing resource accesses the music database in accordance with the automatic composition algorithm.

65. The method of claim 64, further comprising providing a download interface for receiving updates to the music database.

66. The method of claim 59, wherein the computing resource is part of a portable handheld computing system.

67. The method of claim 59, further comprising:
providing a first MIDI event configured to include delta time parameter data associated with the intended playback timing of a first sound sample; and
synchronizing the playback of the first sound sample with the sequence of MIDI events through the use of the first MIDI event.

68. The method of claim 67, wherein the first MIDI event is a System Exclusive MIDI message.

69. The method of claim 67, wherein the first sound sample is decoded from a compressed audio format before being provided to the digital signal processing resource.

70. The method of claim 69, wherein the compressed audio format is ADPCM format.

71. The method of claim 67, wherein the computing resource is comprised of a first portion associated with the MIDI events and a second portion associated with the sound sample data.

72. The method of claim 67, further comprising providing a second MIDI event associated with at least one sound effect to be applied to the first sound sample.

73. The method of claim 72, wherein the second MIDI event is a system exclusive MIDI message.
74. The method of claim 67, wherein the first sound sample is provided from a writeable memory resource location.
75. The method of claim 74, wherein the writeable memory resource location comprises a flash memory.
76. The method of claim 67, wherein the first sound sample is processed in response to user input.
77. The method of claim 67, wherein the timing of the first sound sample is processed in accordance with musical laws.
78. The method of claim 67, wherein the timing of the first sound sample is processed in accordance with a user selectable musical style.
79. The method of claim 67, wherein the timing of the first sound sample is processed in accordance with the beginning of a musical bar.
80. The method of claim 59, wherein one or more of the sound samples are provided to the computing resource in response to user input.
81. The method of claim 59, wherein the computing resource comprises a music synthesizer.
82. The method of claim 59, further comprising providing a MIDI interface configured to receive firmware upgrades associated with the computing resource.
83. The method of claim 59, further comprising providing a MIDI interface configured to transfer audio files.
84. The method of claim 59, further comprising providing a USB interface configured to transfer audio files.
85. The method of claim 59, further comprising providing an illusory radio station function, wherein the computing resource selectively processes algorithmically generated musical data in accordance with an imitation of a radio station.
86. The method of claim 85, further comprising providing a reception means for receiving a broadcast radio station signal, wherein the computing resource selectively switches between processing the illusory radio station function and the broadcast radio station signal.

87. The method of claim 59, further comprising providing a music style selection interface, wherein the automatic composition algorithm is operated in accordance with a user selectable musical style.

88. The method of claim 59 further comprising providing one or more user input resources suitable for user interactivity; wherein at least one user input resource can affect a pitch changing function.

89. The method of claim 59, further comprising providing one or more user input resources suitable for user interactivity; wherein at least one user input resource can affect a tempo changing function.

90. The method of claim 59, further comprising providing a graphical user interface for interacting with the automatic composition algorithm, comprised of instrument lanes.

91. The method of claim 90, wherein the graphical user interface comprises animated sound waves and/or animated pulses.

92. The method of claim 90, wherein said graphical user interface comprises a digital light show available through a TV/video interface.

93. The method of claim 90, wherein the graphical user interface comprises animated pulses rhythmically synchronized with the music.